

Name Key

Date _____

Solving Two-Step Inequalities #1

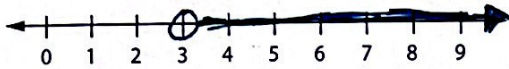


Solve each inequality. Then graph the solution set on the number line.

1 $2y + 4 > 10$

$$\begin{array}{r} -4 \quad -4 \\ 2y + 4 > 10 \\ \hline 2y > 6 \\ \hline y > 3 \end{array}$$

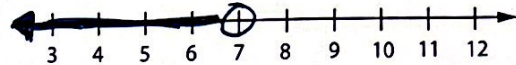
$y > 3$



2 $6x - 12 < 30$

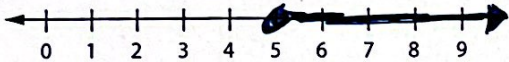
$$\begin{array}{r} +12 \quad +12 \\ 6x - 12 < 30 \\ \hline 6x < 42 \\ \hline x < 7 \end{array}$$

$x < 7$



3 $5t - 6 \geq 19$

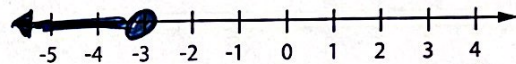
$$\begin{array}{r} +6 \quad +6 \\ 5t - 6 \geq 19 \\ \hline 5t \geq 25 \\ \hline t \geq 5 \end{array}$$



4 $4r + 7 \leq -5$

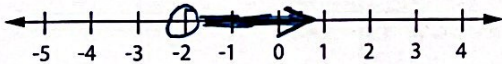
$$\begin{array}{r} -7 \quad -7 \\ 4r + 7 \leq -5 \\ \hline 4r \leq -12 \\ \hline r \leq -3 \end{array}$$

$r \leq -3$



5 $-7w + 4 < 18$

$$\begin{array}{r} -4 \quad -4 \\ -7w + 4 < 18 \\ \hline -7w < 14 \\ \hline -7 \quad -7 \\ \hline w > -2 \end{array}$$



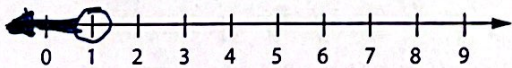
6 $-15m - 30 > -60$

$$\begin{array}{r} +30 \quad +30 \\ -15m - 30 > -60 \\ \hline -15m > -30 \\ \hline -15 \quad -15 \\ \hline m < 2 \end{array}$$



7 $1.75k + 1.25 < 3$

$$\begin{array}{r} -1.25 \quad -1.25 \\ 1.75k + 1.25 < 3 \\ \hline 1.75k < 1.75 \\ \hline 1.75 \quad 1.75 \\ \hline k < 1 \end{array}$$



8 $-1.25j + 6.5 \leq -2.25$

$$\begin{array}{r} -6.5 \quad -6.5 \\ -1.25j + 6.5 \leq -2.25 \\ \hline -1.25j \leq -8.75 \\ \hline -1.25 \quad -1.25 \\ \hline j \geq 7 \end{array}$$

$j \geq 7$



9 $2h - 2\frac{1}{2} \geq 14$

$$\begin{array}{r} +2.5 \quad +2.5 \\ 2h - 2\frac{1}{2} \geq 14 \\ \hline 2h \geq 16.5 \\ \hline h \geq 8.25 \end{array}$$



10 $\frac{1}{3}n - 2\frac{1}{2} > -5$

$$\begin{array}{r} +2.5 \quad +2.5 \\ \frac{1}{3}n - 2\frac{1}{2} > -5 \\ \hline \frac{1}{3}n > -2.5 \quad (3) \\ \hline n > -7.5 \end{array}$$

